

PH113 **A NOVEL APPROACH FOR ESTIMATING RESOURCE UTILIZATION IN PATIENTS WITH SUSPECTED IMMUNE-MEDIATED COAGULOPATHY ASSOCIATED WITH EXPOSURE TO TOPICAL BOVINE THROMBIN**

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OBJECTIVES: Exposure to topical bovine-derived thrombin has been associated with post-operative immune-mediated coagulopathy (IMC). Although rare, IMC has been associated with poor outcomes and additional clinical and financial burden. Formal economic analyses of IMC events have not been performed, in part due to the lack of specific diagnostic codes. The goal of this descriptive study was to develop a novel approach to estimate the economic burden and resource utilization in patients where the presence of this adverse event was suspected. **METHODS:** Data for bovine thrombin-exposed patients discharged between January 2005 and March 2009 were extracted from Premier's Perspective™ database. Coagulopathies were identified utilizing a clinical algorithm based on laboratory tests and/or consultations consistent with investigation of suspected coagulopathies, including IMC. The index hospitalization was the first observed use of bovine thrombin and suspected IMC in the study period. Length of stay (LOS), ICU LOS, total, and departmental costs per patient were calculated for the index hospitalization and any subsequent hospitalization with suspected coagulopathy. Costs were adjusted to 2009 dollars. **RESULTS:** A total of 450 patients exposed to bovine thrombin met the defined criteria for a suspected coagulopathy during their index hospitalization. Five of these patients had suspected coagulopathy during a subsequent hospitalization. The estimated total cost [median (range)] associated with the index and subsequent hospitalizations was \$62,373 (\$1,385-\$1,368,706), including costs in pharmacy \$7,404 (\$237-\$990,267), laboratory \$6,098 (\$247-\$250,718), and blood bank \$3,019 (\$15-\$264,943). Total hospital LOS [median (range)] was 21 days (1–1,027), with a median ICU LOS of 13 days (2–161). **CONCLUSIONS:** The approach used in this study may be useful in quantifying the medical resources utilized by patients developing IMC after exposure to bovine thrombin. Further evaluation of the cost of IMC is warranted because these iatrogenic events may be preventable.

PH114 **A TOOL FOR COST-MINIMIZATION STUDIES IN ANESTHESIA IN COLOMBIA**

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OBJECTIVES: The number of surgical procedures that require anesthesia and the costs associated with them continues rising, in many cases influenced by the use of newer and more expensive anesthetics. Our aim was to develop a tool to assess the costs and resource use in anesthesia in Colombia. **METHODS:** An excel tool to calculate the resource use and costs of medications used for anesthesia was developed. Costs were derived from the hospital pharmacy in a third level institution in Bogota, Colombia, and validated with other reliable sources. The model is capable of simulating the resource use and costs associated with specific procedures. It uses the subject's age, sex, weight and height as variables to determine the dosages of the different drugs, as well as the time estimated for the procedure to determine resource utilization. Finally, the costs are calculated based on the previous variables and the specific anesthetic technique selected, identifying the different combinations of drugs, equipment, and adding a waste factor for the inhalation anesthetics. **RESULTS:** The 2 most common surgical procedures performed under general anesthesia in the institution, laparoscopic cholecystectomy and laparoscopic hysterectomy, were selected for the simulation using 3 common forms of anesthesia: balanced analgesic-based, balanced hypnotic-based. Each one of these forms of anesthesia uses a different set of drugs and dosages, and they could be used interchangeably according to the anesthesiologist preference in most cases. The results of the simulations showed that the resource use and the total cost of the anesthesia provided varied across these three forms, depending mainly on the length of the procedure and the patient's characteristics. **CONCLUSIONS:** The use of tools to determine resource use and costs in procedures that require anesthesia may help physicians and decision makers to compare interchangeable forms of anesthesia to optimize their resources.

PH115 **AN ECONOMIC EVALUATION OF FIBRIN SEALANTS USED DURING INCISIONAL HERNIA WITH DERMOLIPECTOMY PROCEDURES IN SPAIN**

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OBJECTIVES: Fibrin sealants (FS) are used during surgical procedures to achieve hemostasis, as sealants and to adhere tissues or implants to tissue. Because of added costs FS are not used in every procedure that could benefit. This study compared the average costs of incisional hernia procedures with and without use of FS. **METHODS:** Spanish cost data were applied to results from a prospective, randomized controlled trial of sixty patients undergoing incisional hernia with dermolipectomy treated with FS (TISSEEL, Baxter Healthcare) or no FS (controls). Data obtained from the clinical study included: Use of FS, prophylactic antibiotics and antithrombotics, duration of hospital stay, postoperative morbidity, need for blood transfusions and hernia recurrence. The study compared the average cost per surgery in both groups, the incremen-

tal cost for FS and the average costs for treatment of adverse events (AE) attributed to the surgery. **RESULTS:** Based on reported resource use the average costs per incisional hernia case were calculated as €7,284 and €12,744 for surgeries with and without FS use, respectively. The major cost driver was differences in hospitalization length between the treatment arms. A sensitivity analysis that excluded hospitalization costs still found FS to be cost-saving. Significant differences in hematoma rates and blood transfusions increased the average costs per surgery by €1.77 and €43.20 in the control group, respectively. The cost of FS represented 2.5% of total costs in active treatment arm (€179 per surgery). These results are only applicable to Spain and countries with similar clinical outcomes and costs structures. Though, this model can easily be adapted as long as only the cost structure differs. **CONCLUSIONS:** The results suggest the costs of FS in incisional hernia may be offset by reduced ancillary surgical costs and shorter hospitalization periods. Future prospective randomized studies collecting more detailed resource use data are necessary to validate these findings.

PH116 **ADVERSE DRUG REACTIONS OF 33 VARIETIES OF TRADITIONAL CHINESE MEDICINE INJECTIONS ON THE NATIONAL ESSENTIAL MEDICINES LIST (2004 EDITION) OF CHINA: AN OVERVIEW ON PUBLISHED LITERATURES**

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OBJECTIVES: We conducted a literature review on the adverse drug reaction (ADR) of 33 variety of traditional Chinese medicine injections (TCMIs) on the national essential medicine list (2004 edition). **METHODS:** We electronically searched three major Chinese Databases (CBM, CNKI, VIP) since their inception to end-April, 2009. We also retrieved the websites of Ministry of Health and State Food and Drug Administration as well as Newsletter of Adverse Drug Reactions (issue 1 to 22). We descriptively analyzed the TCMIs ADR literatures. **RESULTS:** Among 5405 citations searched, only 1010 studies met the eligible criteria. The total and cumulative amounts of included articles about TCMIs ADRs significantly increase over time. The included 1010 articles were scattered among 297 periodicals, including 55 journals on pharmaceutical medicine (containing 399 articles, accounted for 39.50%) and 64 journals on traditional Chinese medicine (containing only 197 articles, amounted for 19.50%). The articles included were categorized into eight types of design as follows: 348 case reports and 254 case series which accounted for 34.46% and 25.15% of the total articles, 119 overviews (11.78%), 116 randomized control trials (11.49%), 78 cross-sectional studies (7.72%), 61 ADR literature analyses (6.04%), and 28 non-randomized controlled clinical studies (2.77%). The reports of ADRs to Shuanghuanglian, Qingkailing and Yuxingcao injections were the most in all reports for TCMIs (more than 200 articles for each injections, accounting for 41.95% of the total). The four kinds of TCMIs (Shuanghuanglian, Ciwujia, Yuxingcao, Yinzhihuang injections) among the top 5 reported ADR literatures were removed for the market. **CONCLUSIONS:** Articles published on TCMIs ADRs increased year by year, but the research is of low quality and is scattered in a large number of sources. Four TCMIs (Shuanghuanglian, Ciwujia, Yuxingcao, and Yinzhihuang) among the top 5 ADR literatures reported were terminated for sale and use. It is necessary to enforce safety re-evaluation of TCMIs and to promote the clinical rational use.

MENTAL HEALTH – Clinical Outcomes Studies

PMHI **SIDE EFFECTS ASSOCIATED WITH PRESCRIPTION OF METHYLPHENIDATE IN TAIWAN**

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OBJECTIVES: Attention-deficit/hyperactivity disorder (ADHD) is a common mental illness of childhood, and the methylphenidate (MPH) is the most use and effective drugs in treating ADHD. Some recent studies found long-term use of MPH could cause side effects (SE) such as cardiovascular disease, mental illness, and substance abuse. This study focused on the pharmacological treatment of ADHD using MPH, and to evaluate the relationship between MPH and potential SE specifically on above three diseases. **METHODS:** The data source was the overall ADHD patients' cohort during 2000–2007 from a population-based dataset, the National Health Insurance Research Database, in Taiwan. Children (aged 6–18) having newly diagnosed ADHD was included from claims data between January 1, 2001 and December 31, 2006. Newly diagnosed patient was identified as no diagnosed record before 12 months since initial ADHD diagnosed and data on SE were collected during the 12 months after each patient's initial ADHD diagnosed. These patients were divided into two groups according to whether they were using MPH or not. **RESULTS:** We captured 61,878 new diagnosed cases (27,656 cases in MPH group, 34,222 in non-MPH group) during the study period. The Cox proportional hazards model analysis demonstrated that the MPH group have no significant higher hazard ratio (HR) of diagnose for cardiovascular disease and substance abuse. However, the MPH group have significant higher HR of diagnose for mental illness such as oppositional defiant disorder (HR = 1.737, 95% CI: 1.333–2.264) and anxiety disorders (HR = 2.858, 95% CI: 2.517–3.244). **CONCLUSIONS:** Taking methylphenidate to treat ADHD did not increase HR of cardiovascular disease and substance abuse, but may have potential side effect of some mental illness such as oppositional defiant disorder and anxiety disorders.